



Sertifikat

Diberikan kepada
DR. Dr. Ago Harlim, MARS, Sp.KK

Atas partisipasinya sebagai

**PEMBICARA
SIMPOSIUM**

SK PB IDI No : 0654/PB/A.4/10/2016

Peserta : 10 SKP, Pembicara : 12 SKP, Moderator : 4 SKP, Panitia : 2 SKP

KETUA UMUM

Perhimpunan Dokter Anti Penuaan, Wellness,
Estetik & Regeneratif Indonesia

Prof. DR. Dr. Abdul Razak Thaha, MSc, Sp.GK
NPA IDI : 48.390

KETUA UMUM

Perhimpunan Dokter Spesialis
Gizi Klinik Indonesia

Prof. DR. Dr. Nurpudji Astuti Daud, MPH, Sp.GK
NPA IDI : 68.206

KETUA PANITIA

International Anti Aging Conference

Dr. Putro Setyobudyo Muhammad
NPA IDI : 133.806



PERDAWERI



PANITIA BERSAMA

INTAAC PERDAWERI & PIT PDGKI 2016

Jl. Samratulangi no 29 Jakarta Pusat (10350) Indonesia, Telp/Fax : 021-3150679 , 3155260

Web : www.intaac.com ; Email : intAAC2016@gmail.com

Jakarta, 4 Oktober 2016

Nomor : 065/Perdaweri - Jkt/10/2016
Lampiran : 1 berkas
Perihal : Permohonan sebagai Pembicara

Kepada Yth:
DR.dr. Ago Harlim.MARS., SpKK
Di Tempat

Dengan Hormat,

Sehubungan dengan akan dilaksanakannya kegiatan Ilmiah *International Anti-Aging Conference (InTAAC)* PERDAWERI dan Pertemuan Ilmiah Tahunan (PIT) Perhimpunan Dokter Spesialis Gizi Klinik Indonesia (PDGKI) tahun 2016, bersama ini kami mohon kesediaan Bapak menjadi Pembicara dalam kegiatan tersebut yang akan dilaksanakan pada:

Hari/Tanggal : Minggu / 16 Oktober 2016
Sesi : 6 (enam)
Waktu : susunan acara terlampir
Materi : Stemcell for Anti Aging
Tempat : Ruang Puri Ratna, Hotel Grand Sahid Jaya, Jakarta

Terlampir kami sampaikan lembar kesediaan sebagai Pembicara dan form Daftar riwayat hidup. Untuk informasi lebih lanjut, mohon kiranya Staff Bapak dapat berkomunikasi dengan Sekretariat Panitia melalui Sdri Sri Handayani/Iyek di nomor HP 08561938327, email iyek2011@gmail.com.

Demikian kami sampaikan, atas perhatian dan kesediaan waktu nya kami ucapkan terimakasih.

Ketua Panitia,



Dr. Putro S Muhammad
NPA IDI : 1101.133806

LEMBAR KESEDIAAN

Yang bertanda tangan dibawah ini :

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Institusi : Universitas Kristen Indonesia
Jabatan : Kepala bagian Kulit dan Kelamin
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1. Bersedia /~~tidak bersedia~~ menjadi Pembicara dalam kegiatan Ilmiah *International Anti Aging Conference (InTAAC)* Perdaweri dan *Pertemuan Ilmiah Tahunan (PIT)* Perhimpunan Dokter Gizi Klinik Indonesia (PDGKI) tahun 2016
2. memberikan CV
3. memberikan abstrak paling lambat 7 Oktober 2016

Mohon surat kesediaan ini ditandatangani dan di email ke intaac2016@gmail.com.

5, Oktober 2016



(Dr dr Ago Harlim, MARS, SpKK)

inTAAC 2016 #

Permohonan sebagai Pembicara - Dr. Ago

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Kepada Yth:

DR.dr. Ago Harlim.MARS., SpKK

Di Tempat

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IntAAC
International Anti Aging
Conference 2.0

&

1st NATIONAL CONGRESS OF

PERDAWERI

SYMPOSIUM

Ago Harlim

SPEAKER

Stem cell for antiaging

Ago Harlim
Christian University of Indonesia

Introduction : Stem cells are cell that can differentiate into any cells. Stem cells can be used for therapy. Initially stem cells only used as therapy for diseases, in newest research, stem cells also used as anti aging therapy.

Methods : Stem cell was taken from liposuction fat, processed with centrifugation, incubation, and washed with collagenase to gain the stem cell. Stem cell given by intravenous injection for anti aging therapy.

Result : 2 weeks after stem cell therapy, the face looks brightened, reduced wrinkles, better skin texture, stamina improved, and improvement of hernia nucleus pulpous in three months.

Discussion : Stem cell therapy basically works in injury places. We used intravenous injection delivery methods so the stem cell works all over the body to heal the injury places, including degraded collagen caused by aging. Injection of stem cell significantly increased collagen synthesis.

Conclusion: Stem cell can be used as anti aging therapy

Key words: *intravenous, stem cell, anti aging*

Stem cell for antiaging

Ago Harlim
Christian University of Indonesia

Stem Cell Is A cell that has an ability to continuously divide and differentiate (develop) into various other kinds of cell or tissues. All cells in the body come from stem cells. Stem cells can Self renew to make more stem cells and Differentiate into a specialized cell type. As individuals age, the skin undergoes changes, such as irregular pigmentation, thinning and loss of elasticity, that are due to both genetic and environmental factors. These changes may worsen, progressing to precancerous and cancerous diseases. Various medical treatments and topical cosmeceuticals have been used to treat some symptoms of photoaging, however, the results have been less than satisfactory. Mesenchymal stem cells within the stromal-vascular fraction of subcutaneous adipose tissue, adipose-derived stem cells (ADSCs), display multi-lineage developmental plasticity and secrete various growth factors that control and manage the damaged neighboring cells. Recently, the production and secretion of growth factors has been reported as an essential function of ADSCs, and diverse regenerative effects of ADSCs have been demonstrated in the skin. For example, conditioned medium from ADSCs (ADSC-CM) stimulated both collagen synthesis and migration of dermal fibroblasts, which improved the wrinkling and accelerated wound healing in animal models. ADSC-CM also inhibited melanogenesis in B16 melanoma cells, and protected dermal fibroblasts from oxidative stress induced by chemicals and UVB irradiation. Therefore, ADSCs and soluble factors show promise for the treatment of photoaging, and this review introduces recent research developments of the ADSCs and ADSC-derived secretory factors regarding this issue.

Stem cell Potency is the ability to differentiate into all possible cell types. Examples are the zygote formed at egg fertilization and the first few cells that result from the division of the zygote.

- Pluripotent
 - The ability to differentiate into almost all cell types.
 - Examples include embryonic stem cells and cells that are derived from the mesoderm, endoderm, and ectoderm germ layers that are formed in the beginning stages of embryonic stem cell differentiation.
- Multipotent
 - The ability to differentiate into a closely related family of cells.
 - Examples include hematopoietic (adult) stem cells that can become red and white blood cells or platelets.
- Oligopotent
 - The ability to differentiate into a few cells.
 - Examples include (adult) lymphoid or myeloid stem cells.
- Unipotent
 - The ability to only produce cells of their own type, but have the property of self-renewal required to be labeled a stem cell.

Examples include (adult) muscle stem cells

History Adult Stem Cell

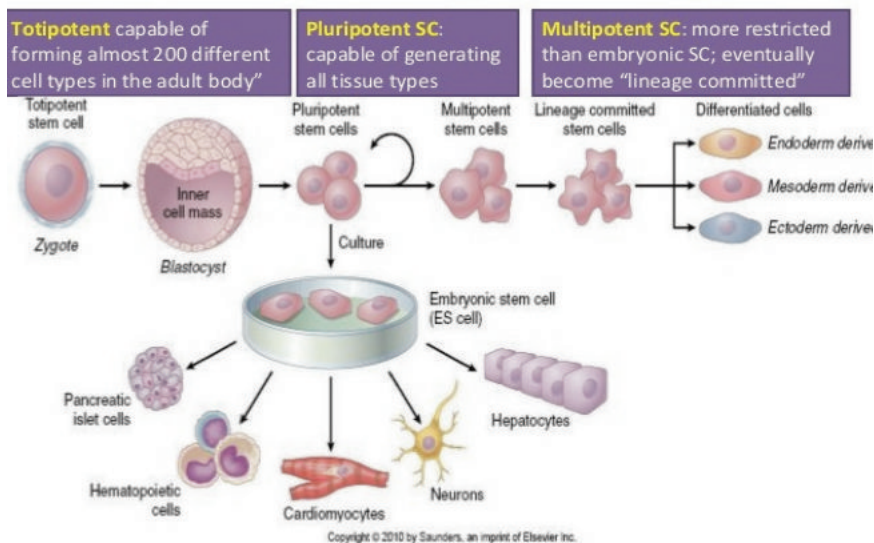
It started about 60 years ago. They found Bone marrow contains at least 2 kinds of stem cells, and then they found hemopoietic stem cell and stromal stem cell

Hematopoietic stem cells is stem cell forms all types of blood cells in the body and Stromal stem cells is from mesenchymal stem cells which can generate bone, cartilage and fat cells – support the formation of blood and fibrous connective tissue.

In 1960, most scientists believed adult brain could not generate new nerve cells

In 1990s, scientists agreed that adult brain does contain stem cells that are able to generate the brain's three major cell types : astrocytes, oligodendrocytes and neurons / nerve cells

Stem Cells: Origins and Types



The difference between embryonic stem cell and adult stem cell

<u>Embryonic vs Adult Stem Cells</u>	
<ul style="list-style-type: none">• Totipotent<ul style="list-style-type: none">– Differentiation into ANY cell type• Large numbers can be harvested from embryos• May cause immune rejection• Potential for undesired tumor formation (teratoma)• High ethical controversy & uncertain legal status	<ul style="list-style-type: none">• Multi or pluripotent<ul style="list-style-type: none">– Differentiation into some cell types, limited outcomes• Limited numbers, more difficult to isolate• Less likely to cause immune rejection, since the patient's own cells can be used• Less likely to form tumors• Less moral & legal controversy

Adipose-derived stem cells (ASCs) are able to differentiate into multiple cell lineages, including endothelial, adipogenic, osteogenic, chondrogenic, and myogenic cell lines. This has previously been reported to be the result of a cellular milieu of various soluble factors produced by the ASCs themselves. This secretory profile of ASCs is regulated by exposure to different agents.

With the prominent role the cellular environment of ASCs plays, in vitro studies have focused on manipulating the culture medium of the ASCs in an effort to direct differentiation patterns in a lineage-specific pattern.

Adult Stem Cell can be divided by 3 kind of stem cell source:

Hematopoietic stem cells from Red blood cells, B lymphocytes, T lymphocytes, natural killer cells, neutrophils, basophils, eosinophils, monocytes, and macrophages.

Mesenchymal stem cells from Bone cells (osteoblasts and osteocytes), cartilage cells (chondrocytes), fat cells (adipocytes), and stromal cells that support blood formation.

Neural stem cells from Nerve cells (neurons) and non-neuronal cells—astrocytes and oligodendrocytes

Previous reports have suggested that the beneficial effects of bone marrow-derived MSC-based therapy, such as angiogenesis, anti-inflammation, and antiapoptosis, are largely mediated by the trophic actions of cytokines and growth factors secreted by the bone marrow-derived MSCs rather than by the differentiation of MSCs into local tissue cell types.

Similarly for ASCs, it has been shown that the beneficial impact on different organs/tissues within the human body may be due to soluble factors produced by ASCs rather than their differentiation capability toward different mature line-ages. The ASCs secretome has the potential to be a powerful tool for use in future approaches to develop cell-/tissue-based therapeutics for regenerative medicine. A number of papers have described the secretory profiles of preadipocytes, ASCs, or adipose tissue, which were determined using enzyme-linked immunosorbent assays or related techniques. Analyses of the soluble factors released from human ASCs have revealed that cultured ASCs, at relatively early passages, secrete hepatocyte growth factor (HGF), vascular endothelial growth factor (VEGF), transforming growth factor- β , insulin-like growth factor (IGF)-1, basic fibroblast growth factor (bFGF), granulocyte-macrophage colony-stimulating factor, tumor necrosis factor (TNF)- α , interleukin-6, 7, 8, and 11, adiponectin, angiotensin, cathepsin D, pentraxin, pregnancy zone protein, retinol-binding protein, and CXCL12.

The proliferation capacity of ASCs seems to be greater than that of bone marrow-derived MSCs. Previous reports have shown that the doubling times of ASCs during the logarithmic phase of growth range from 40 to 120 hours. are influenced by donor age, type (white or brown adipose tissue) and location (subcutaneous or visceral) of the adipose tissue, the harvesting procedure, culture conditions, plating density and media formulations [35, 56]. The younger the donor, the greater the proliferation and cell adhesion of the ASCs, while cells gradually lose their proliferative capacity with passaging. Based on b-galactosidase activity, senescence in ASCs is similar to that in bone marrow-derived MSCs.

ASCs are generally considered to be stable throughout long-term culture, as it was reported that even ASCs that had passed more than 100 population doublings had a normal diploid karyotype. On the other hand, one report suggests that human ASCs undergo malignant transformation when passaged for more than 4 months; although recent reports show that spontaneous transformation of MSCs may apparently be due to cross-contamination with malignant cell lines such as fibrosarcoma and osteosarcoma. Since the issue of spontaneous ASCs transformation is still controversial, further experiments and discussion are required

Advantages of Adult Stem Cell

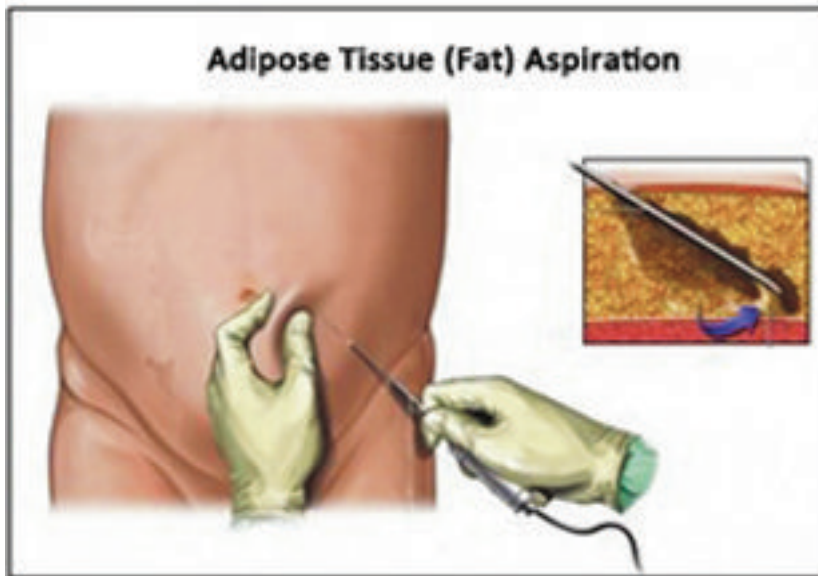
- Somewhat specialized – inducement maybe simpler
- **Not immunogenic** – recipients who receive the products of their own stem cells will not experience immune rejection
- Relative ease of procurement – some adult stem cells are **easy to harvest** (skin, muscle, marrow, fat)
- **Not tumorigenic** – tend not to form tumors
- **No harm** done to the donor

New Treatments Mesenchymal Stem Cell is Bone and cartilage repair, Heart and blood vessel repair, Inflammatory and Autoimmune diseases, Aesthetic and anti aging.

The benefit Adipose Stem Cell Therapy:

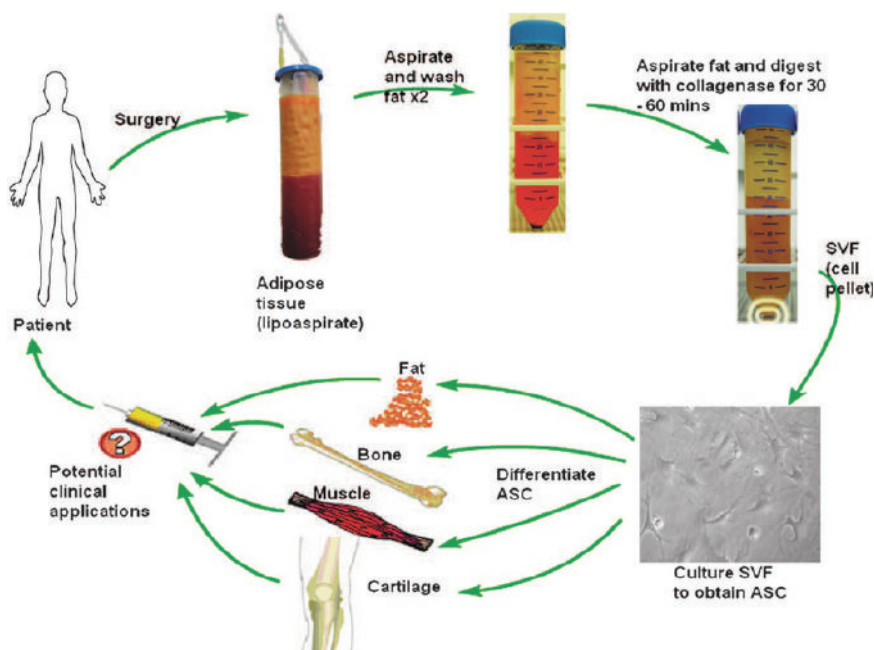
- **Autologous**
- Small sample of adipose tissue (fat) is removed from above the superior iliac spine or abdomen under a local anesthesia
- Much easier and less invasive than performing a bone marrow extraction

- Adipose tissue contains much larger volumes of mesenchymal stem cells than does bone marrow



Procedure Adipose Stem Cells Therapy

- ✦ Simple Blood test
- ✦ Tumor marker
AFP, PSA, Ca199, HCG



Benefit of Autologous Fat Transfer With SVF

- Improved the survival of fat cells
- The adipose tissue is less absorbed

- Formation of greater numbers of new blood vessels
- Increased the fat graft viability
- The augmentation effect were superior then the conventional

Fat transfer

after



Fat transfer

Before

After



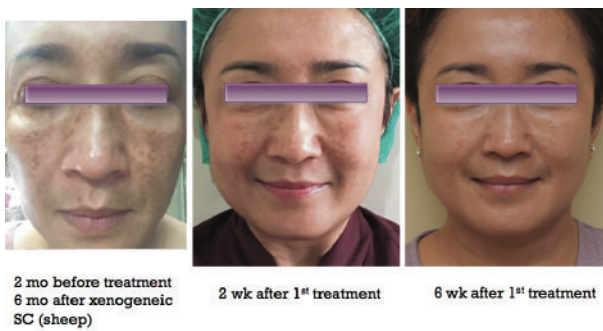
Fat transfer



Fat Transfer



3x SVF + 2x PRP (2 Weeks Apart)



Courtesy of : Karina F. Moegni

3x SVF + 2x PRP (2 Weeks Apart)



Courtesy of :
Karina F.
Moegni

Conclusion: Stem cell can be used as anti aging therapy

Reference:

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